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REPORT C 3  
APRIL - JUNE '68



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Riding patterns and  
trends on the Gov-  
ernment of Ontario's  
GO Transit rail service

## REPORT C3

April to June, 1968

OCTOBER, 1968





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**Government of Ontario Transit**

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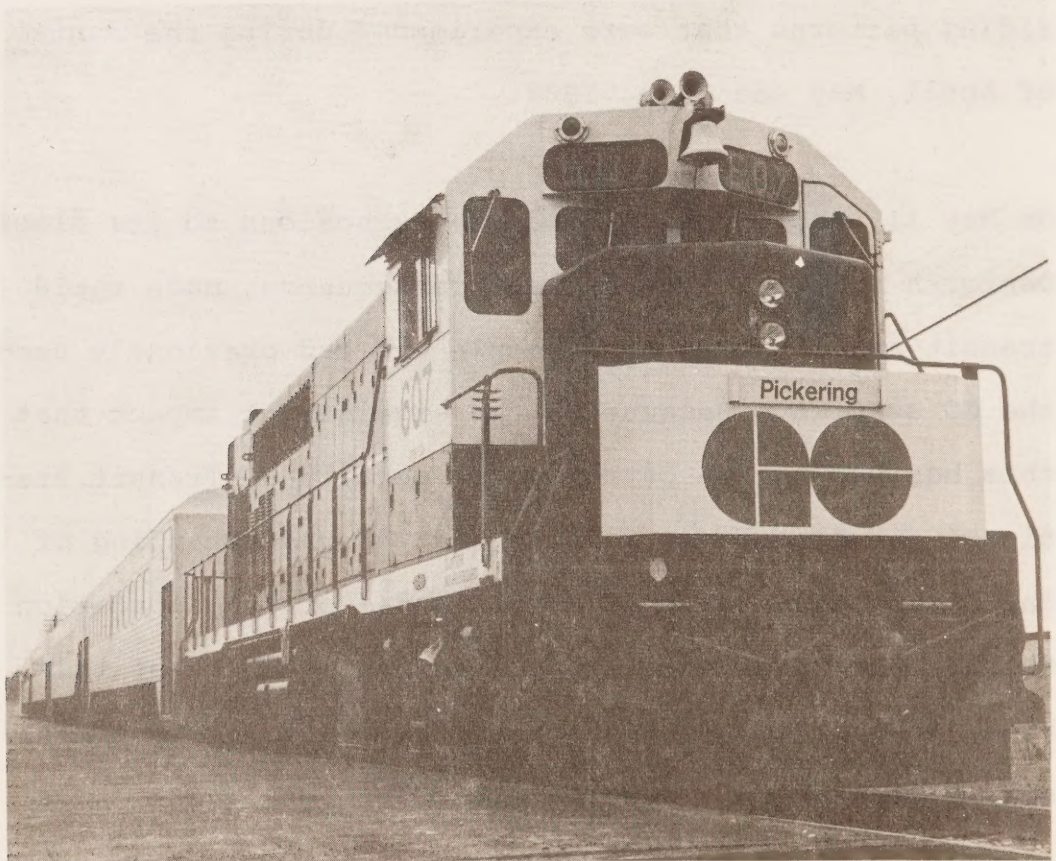
## 1. PREFACE

This, the third in the C-series of reports, examines the riding patterns that were experienced during the months of April, May and June, 1968.

On May 11, the T.T.C. opened the extensions to its Bloor-Danforth subway line and, as a consequence, made rapid transit available to many people who had previously used the GO service. Because of the significant impact that this has had on the patronage at certain GO Transit stations, and because it is felt that an understanding of the interactions of the various modes of transportation should be a fundamental objective for research of this kind, this development has been discussed in some detail and is presented in section 3.2

Several changes relating to the service offered by GO Transit took place during the quarter under review. The restricted service that had been operated to Lorne Park on a skip-stop basis with Clarkson was discontinued after April 26. This is discussed further in section 2.6.

From April 28 onwards, an extra train was introduced to run eastbound each day from Oakville to Pickering in the late evening. Also, effective the same day, the first six Sunday trains were withdrawn from service. The effects of these changes are discussed in Section 3.1.







## 2. RESPONSE PATTERNS & TRENDS

### 2.1 Introduction

The data used in this section is derived from ticket records supplied to GO Transit by the Canadian National Railways. A full breakdown of the data is executed for Wednesdays only as the volume of tickets involved would make a complete daily breakdown a task out of proportion to the additional information received (see Report C1 for a comparison between Wednesdays and other weekdays). Many of the charts that follow are based on the average Wednesday carryings to form comparisons and trends from month to month.

Reference is often made in this report to "total exits" or "exiting". These simply refer to the number of people leaving a train at a particular station. Clearly the total number of exits at all stations in any one day is equal to the total number of trips that were made on GO Transit that day.

## 2.2 Monday to Friday weekly trend

Figure 1 shows the average weekday exits for each week from the start of the service on May 23, 1967 to June, 1968.

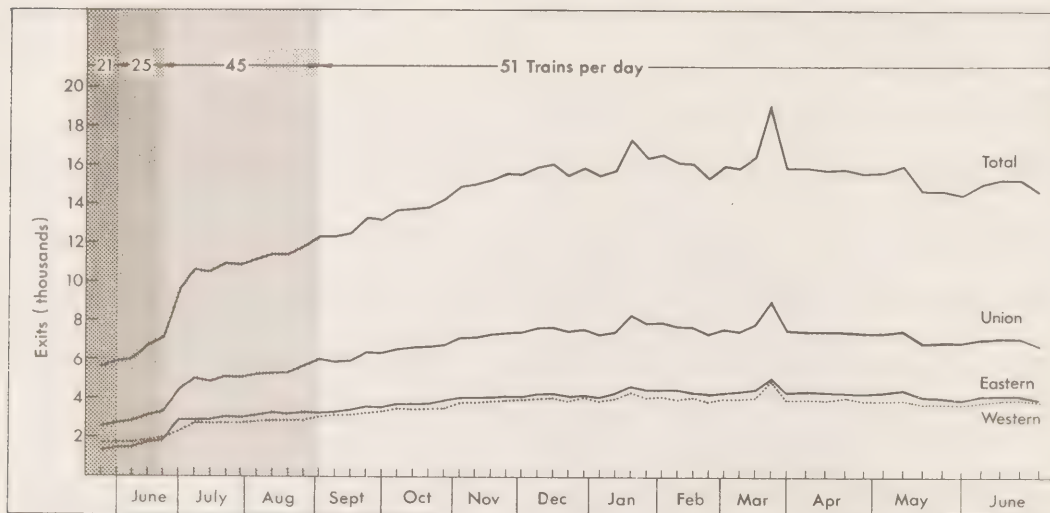


FIGURE 1: The weekday riding pattern established since the start of the service.

During April and the first two weeks in May, weekday carryings remained fairly constant, fluctuating between 15,600 and 16,000. However, the opening of the subway extensions at the end of the second week in May caused GO Transit carryings to drop off immediately to a level of around 14,600. Riding increased somewhat during the first three weeks in June, due mainly to patrons at the outer suburban stations, (see section 2.6), but fell during the last week.

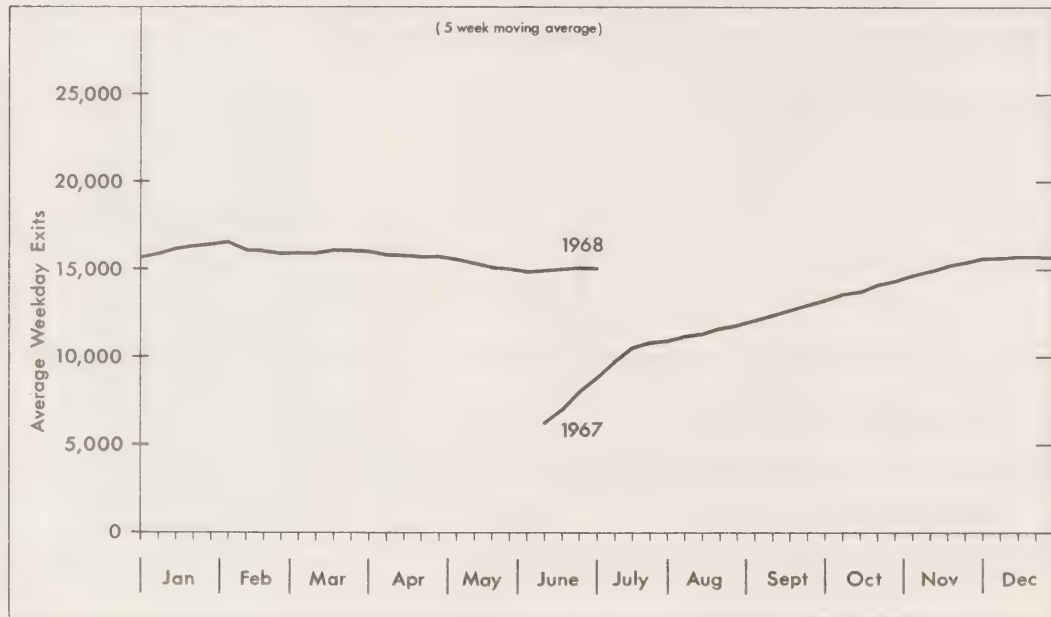


Riding in the eastern corridor experienced an appreciable fall-off during April, May and June, as the table below shows. The situation in the western corridor was more encouraging; riding dropped in May, but picked up significantly in June.

	Average weekday exits		
	April	May	June
Eastern corridor	4330	4170	4130
Western corridor	3940	3820	3910

Although both corridors were adversely affected by the subway extensions, by far the greatest impact was felt at Scarborough and Eglinton in the eastern corridor. The increases at Pickering during May and June helped to offset these losses, but were not sufficient to wipe them out. In the western corridor, on the other hand, significant increases at Oakville, Clarkson and Port Credit were sufficient to almost compensate for the loss of patrons at Mimico and Long Branch.

Figure 2 shows the overall trend in weekday riding that has been observed since the start of the service. Week by week fluctuations have been "smoothed" by taking a five week moving average of weekday exits.



*FIGURE 2: The overall smoothed weekday trend since the beginning of the GO Transit service.*

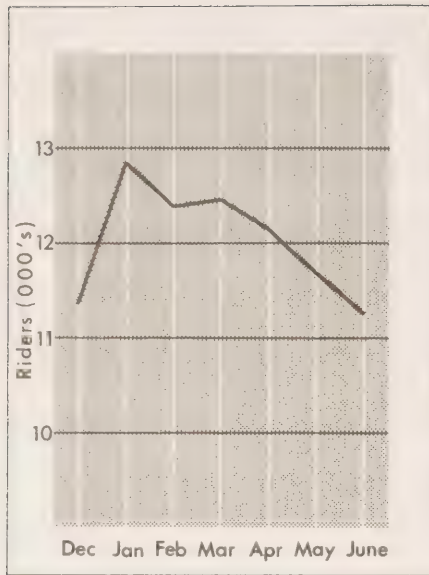
Figure 2 shows that GO Transit seems to be following the general seasonal pattern that has been experienced by other commuter rail systems. Carryings were highest during the winter months of January, February and March, and fell off during April, May and June, this fall-off being accentuated by the loss of patrons to the T.T.C. during May.

It is valueless at present to compare riding in 1968 with the equivalent period in 1967. Only one common month, June, is available and the newness of the service and the restricted schedules that were features of June, 1967, make any such comparison worthless. In subsequent reports, however, it is intended to make increasing reference to the previous year in order to measure the growth of the system and the impact of seasonal factors.

### 2.3 Trends in peak & off-peak riding

For ease of analysis, peak passengers are defined as those inbound towards Toronto Union Station from both the eastern and western corridors during the 6:00 a.m. to 9:00 a.m. period and those riding outbound in the evening between the hours of 4:00 p.m. and 7:00 p.m. All other riders are considered as travelling in the off-peak.

Report C-2 described how the trip purposes of people riding in the peak times were different from those riding during the off-peak. These dissimilar characteristics probably account for why the recent trends in peak and off-peak riding were so different (see figures 3 and 5). These trends are individually discussed below.



◀ **FIGURE 3: Peak trips**  
(average Wednesdays)

**Peak trips** Since March, peak trips have fallen off sharply. This decrease occurred mainly at stations in the eastern corridor, as the table below shows:

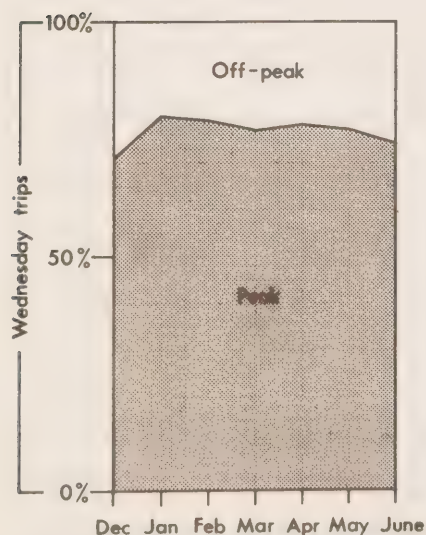
	Peak trips (average Wednesday)			
	March	April	May	June
Eastern corridor	6770	6610	6220	5790
Western corridor	5700	5530	5460	5460
Total	12470	12140	11680	11250

As was pointed out in section 2.2, the subway extensions primarily affected riding within the eastern corridor and this was reflected in the peak riding response. Had



the subway not been extended, it is likely that peak riding in total would have levelled out to around 12,000 during May and June.

In addition to this unique factor, there is thought to be a seasonal factor which tends to reduce peak riding at this time of the year. This is based on the assumption that when the worst winter months are over and the weather is less likely to cause hazardous road conditions, some of the many regular commuters who travel in peak times switch back to their automobiles. This is also influenced by the fact that, in the colder months, wives like to have the use of the car during the day, whereas during the summer they are prepared to walk or take public transit.



The percentage split of weekday riding into peak and off-peak components can be seen from figure 4.

FIGURE 4: The peak and off-peak components are shown as a percentage of all day riding for the average Wednesday in each month.

The peak riders' contribution to total weekday riding has fallen since January, reflecting the actual decrease in the number of passengers travelling at peak times. Although total riding dropped over this period, it did not drop as much as its peak component due to the stability of off-peak riding.

**Off-peak trips :** After a boost in March, off-peak riding fell in April to the level it had maintained during January and February. In spite of the subway

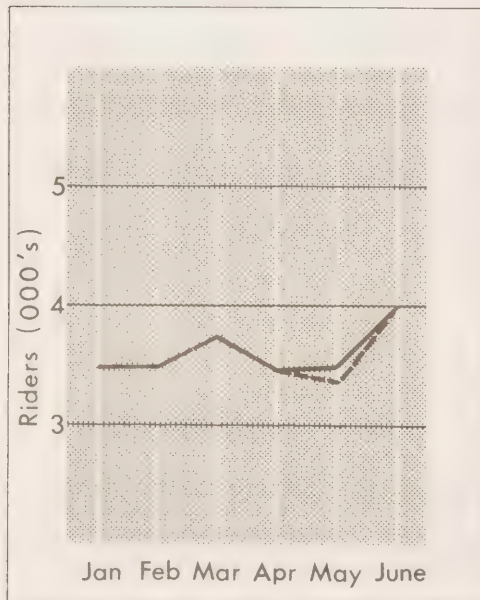


FIGURE 5: Off-Peak trips  
(average Wednesdays)

extensions, off-peak riding increased slightly in May. However, it must be pointed out that this was due mainly to exceptionally high off-peak riding on the second Wednesday in May. The broken line in figure 5 shows the average level of off-peak riding with this day excluded and presents a more realistic picture.

There seems little doubt that the subway extensions did attract some people who would otherwise have used GO Transit during off-peak times, particularly within the eastern corridor. In spite of this, off-peak riding increased significantly within both corridors during

June, and this increase would probably have been more marked if the additional subway facilities had not been introduced. It is relevant to note here that June experienced a large increase in children trips (see section 2.7) and, as most of these took place in off-peak times, this factor was a significant contributor to the high level of riding during these times.

## 2.4 Saturday, Sunday & holiday riding

### Saturdays

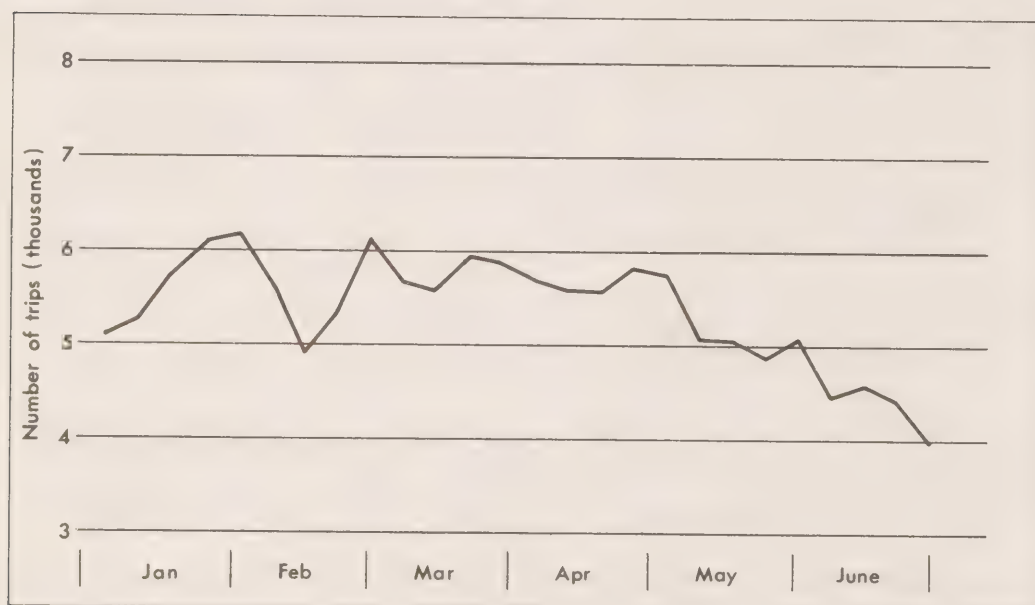
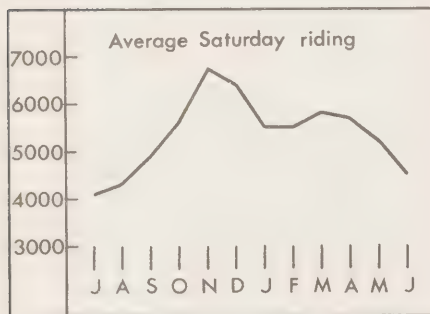


FIGURE 6: Saturday trips

After fluctuating between 5,500 and 6,000 during March and April, Saturday riding dropped heavily after the opening of the subway extensions on May 11th, and continued to drop through June. However, the subway was not the only cause of this drop, as many of the

stations that lie out of range of the subway experienced significant decreases. This was possibly due to the many people who travel out of the Toronto area during the summer weekends. On the other hand, one might have expected those who remained to have used the lakeshore service more often in the warmer weather for social and recreational purposes. This does not appear to have been the case.

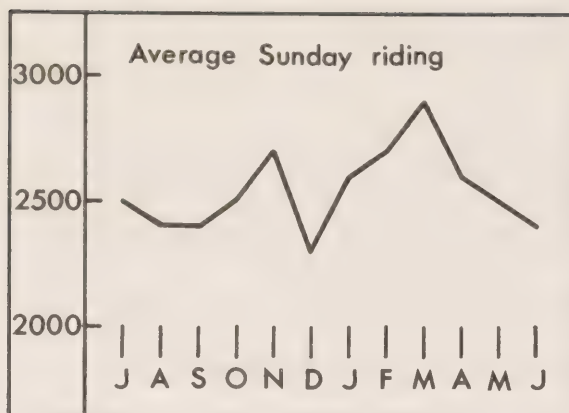


The inset shows the monthly average Saturday carryings since July, 1967. The pattern displays a noticeable seasonal variation and it will be interesting to see

whether this is repeated in subsequent months.

**Sundays** During March, Sunday carryings reached the highest level experienced to date. It was expressed in Report C-2 that Sunday riding was on an uptrend, but this proved to be premature. Riding fell in April and again in May, when the subway extensions attracted some riders. However, immediately after the T.T.C.





extensions, carryings increased slightly and remained thereafter at around the 2,500 mark. The inset shows the monthly average for Sunday riding since

July, 1967, and confirms the absence of any growth trend.

Recent surveys have revealed that over half the trips taken on Sundays are for social visits and that nearly three-quarters of all trips are discretionary in the sense that their timing and frequency are flexible. Given this large body of riders who are not strongly committed to using rail transportation, it is difficult to say whether the fluctuations observed for Sunday riding reflect any seasonal influences, or whether they are merely the result of this lack of regular commitment.

**Holidays :** There were two public holidays that occurred during the quarter under review. April 12 was Good Friday and the system carried 2,980 passengers. A similar number of riders used GO Transit on May 20 -- Victoria Day -- when carryings totalled 2,920.

## 2.5 Central & non-central trips

Non-central trips are defined as those taken between suburban stations, i.e. they neither originate nor terminate at Union Station.

Non-central weekday trips have experienced a distinct uptrend over the last few months, and since December

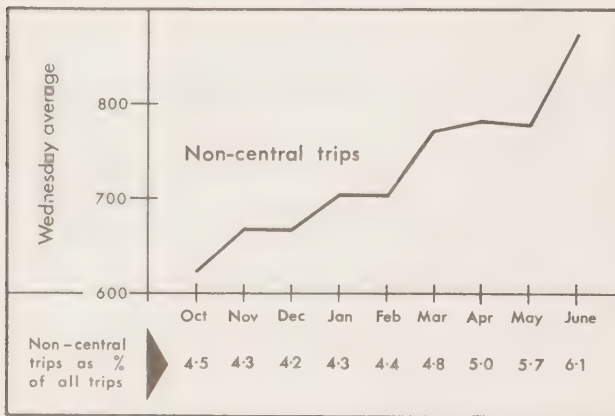
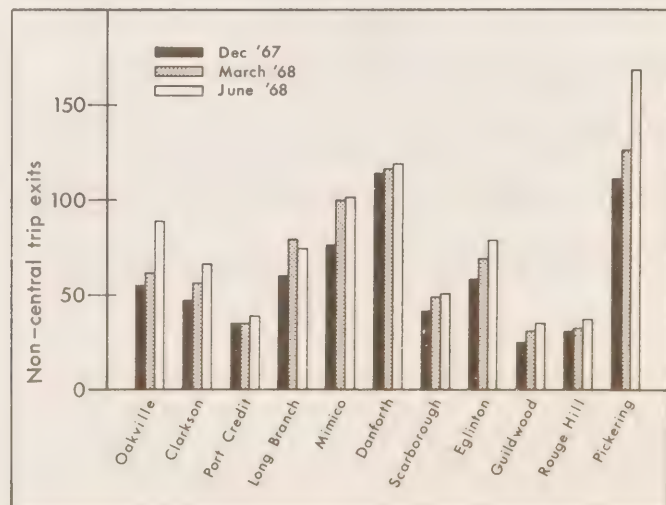


FIGURE 7: Non-central trips

have accounted for an increasingly higher percentage of all weekday trips. Non-central trips remained static during April and May and then rose sharply during

June. This again was mainly due to large increases in non-central exits at the two terminal stations. Figure 8 demonstrates this.

FIGURE 8: Non-central exits based on average Wednesdays for the months of December, 1967, March and June, 1968.



As section 2.7 below establishes, there was a significant increase in children exits at Oakville and Pickering, and it is thought that these riders accounted for much of the increase in non-central riding.

## 2.6 Patronage trends at individual stations

Figure 9 shows the average weekday exits for each suburban station during the quarter under review.

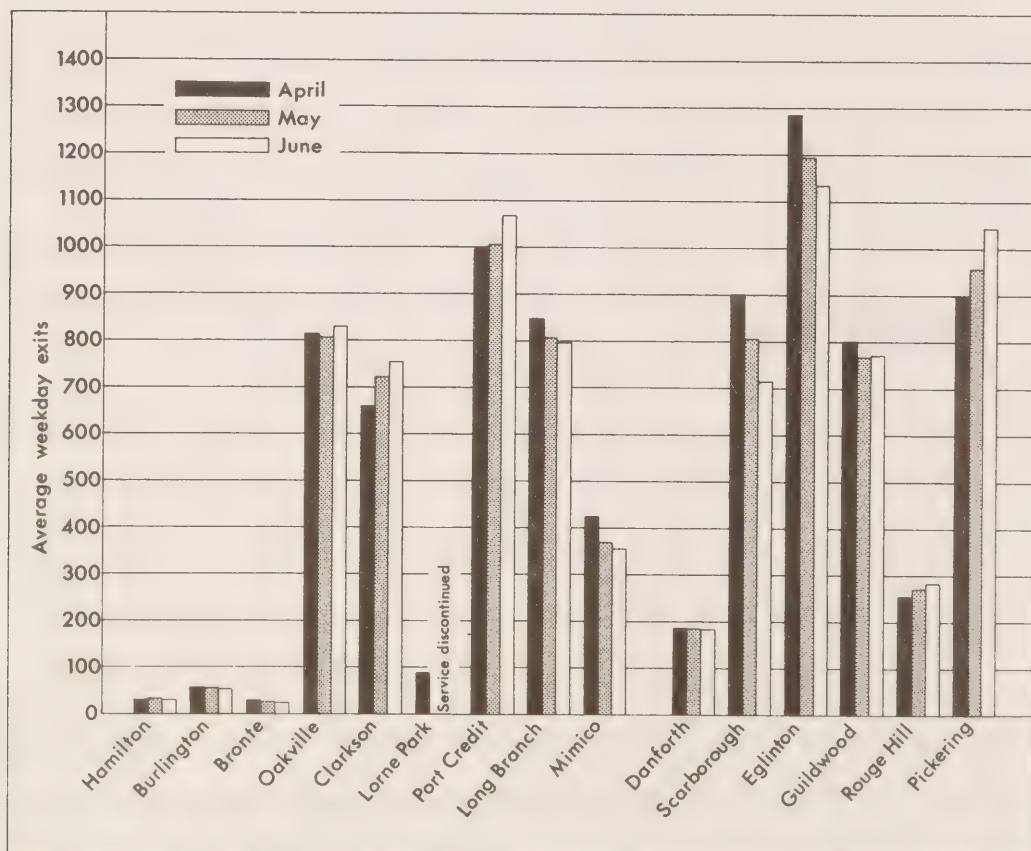
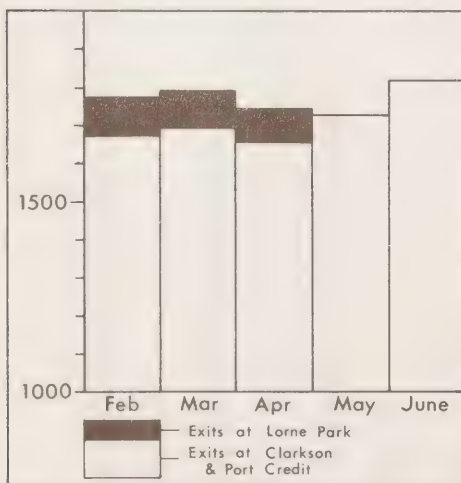


FIGURE 9: Average number of people exiting at the suburban stations during April, May and June.

There are two distinct and opposite trends displayed here. The inner stations, Long Branch, Mimico, Danforth, Scarborough and Eglinton, all experienced decreases during both May and June. This was mainly due to the subway extensions. However, the outer stations, Oakville, Clarkson, Port Credit, Rouge Hill and Pickering, displayed increases in both these months. These occurred for different reasons.

The two trains a day service to Lorne Park station was discontinued after April 26, and many of the 100 or so people who used this station transferred to the next nearest station at Clarkson. Some of the Lorne Parkers living to the east of the station may have transferred



to Port Credit, but there was no significant increase at this station during May. The inset shows that the closure of Lorne Park did not significantly affect the total GO patronage at the stations in the vicinity.

Clarkson showed gains also in

June, which may have been due to ex-Lorne Park patrons who had returned to GO Transit after experiencing an initial reaction against using the service.

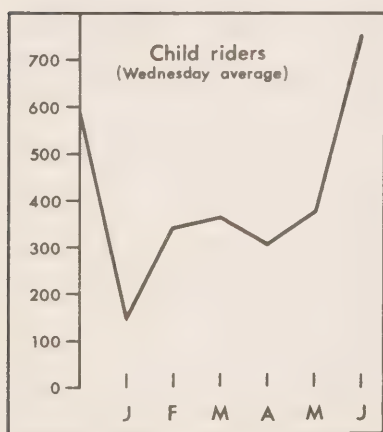


The gains at Port Credit during June are thought to be the result of people moving into new high-rise developments near the GO Transit station. Oakville and Pickering experienced increases during June which are thought to have been caused, to a large extent, by the increase in child riders on school trips to these stations.

## 2.7 Children on GO Transit

Children under 4ft. 8ins. -- corresponding to an age of around 12 years -- can ride between any two stations on the GO Transit system for 25¢, and it is these riders who are described in this section.

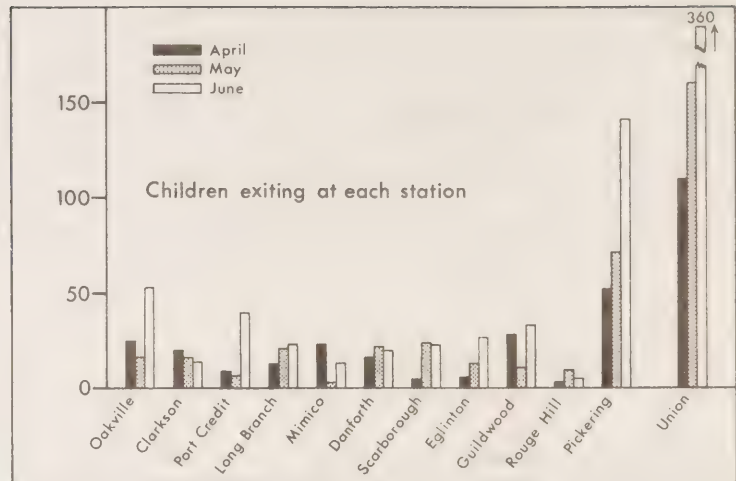
The number of children riding GO Transit during weekdays



was the highest ever in June, as the inset shows. Nearly 600 out of the 750 children who rode the trains on the average Wednesday in June were in parties. This suggests that many of the kids were on organized school trips. Figure 10 below shows that,

apart from Toronto Union, the terminal stations of Oakville and Pickering showed the largest gains during June. The high predominance of exits at these stations, particularly at Pickering, indicates that many of these

FIG 10: Children exiting all stations during average Wednesdays in April, May and June, 1968



trips were taken solely for a ride on GO Transit, with children travelling to the terminal stations and back. Union Station exits were nearly half (48%) of all exits, and so most of these children either started their trips from Toronto, or went to Toronto from the suburbs. It is quite feasible that suburban schools might have used GO Transit to visit such attractions as the Royal Ontario Museum.



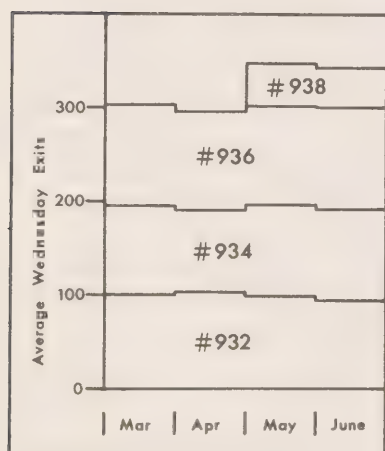


### 3. PASSENGER RESTRAINTS & ATTRACTORS

#### 3.1 Internal factors

##### Change of schedule

On April 28, an extra train (No. 938) was introduced to run eastbound from Oakville to Pickering arriving Union at 0007 a.m. and departing at 0013 a.m. This train extended the late night service available to eastbound riders by one hour.



The inset shows the average weekday carryings that have been experienced on this, and the three earlier eastbound trains. This late train has attracted, on average, around 45 extra patrons to GO Transit. This has been achieved without

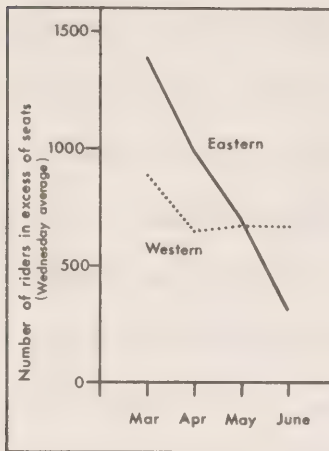
affecting carryings on the earlier trains.

On Sundays, train No. 938 has attracted around 20 riders, while on Saturdays patronage has been around 50. It would seem that many of these late night Saturday riders have been attracted from the earlier train No. 936, as carryings on this train dropped noticeably upon the introduction of No. 938.

Another schedule change which came into effect on April 28, was the withdrawal of the first three eastbound and westbound trains from service on Sundays. Thus the earliest trains now available on Sundays leave Oakville eastbound at 8:30 a.m. and Pickering westbound at 9:00 a.m. The six trains that were cancelled carried a total of around 90 people during February, March and April. After these trains were withdrawn, carryings on the two trains that had previously followed them (but which now became the earliest trains) increased by up to 20 riders. However, most of the people who rode these early trains appeared to have been lost to GO Transit, probably because the majority of early Sunday riders were people commuting to work and were therefore committed to arriving at a specific time. These people would have had to seek alternative transportation when the early services were discontinued.



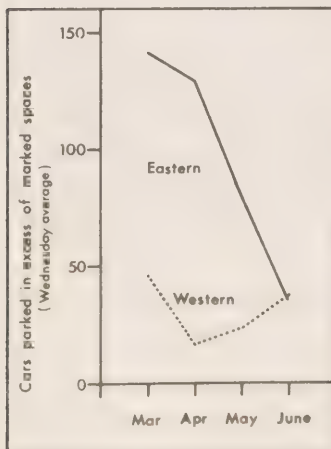
### Shortage of seats



During the quarter under review the number of people who had to stand on peak hour trains to and from stations in the eastern corridor dropped sharply (see inset). This was mainly due to the fall-off in patronage that occurred at Scarborough and Eglinton due to the subway extensions.

In the western corridor, the average number of standees on weekday trains remained constant. This reflected the relative stability of total peak riding that took place within the western corridor (see section 2.3).

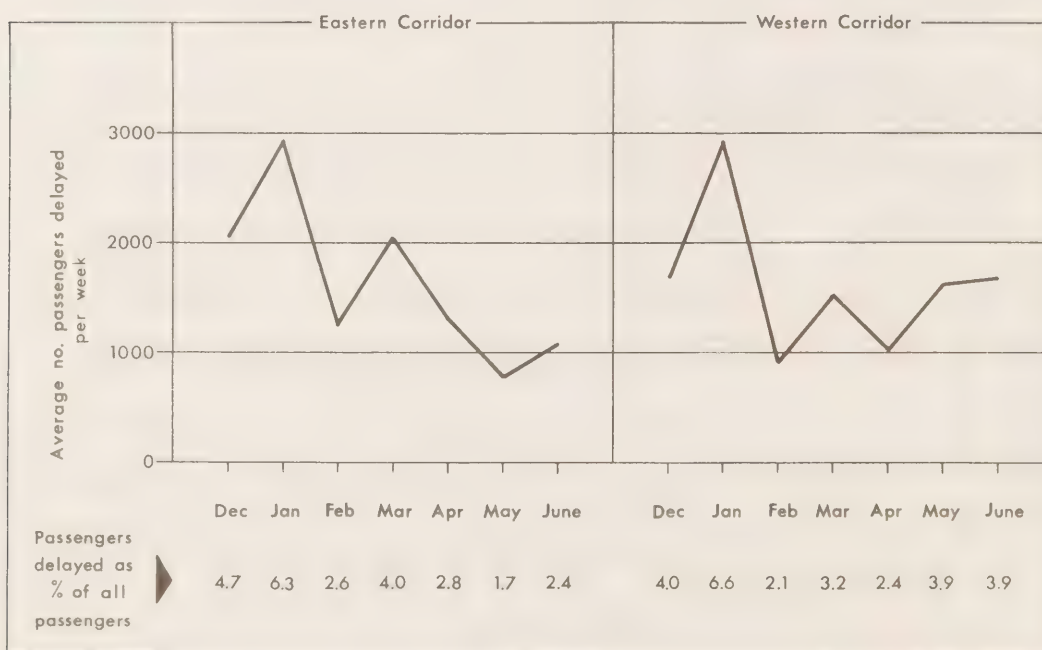
### Shortage of parking spaces



Overcrowding at the GO Transit parking lots was eased appreciably over the quarter under review (see inset). During May and June, there were only three lots which were over-utilized: Eglinton north and Scarborough in the eastern corridor, and Port Credit south in the west.

**Train performance** GO Transit maintained a high degree of reliability during April, May and June. It is unlikely that the few delays that inevitably occurred on the GO Transit system -- which shares lines with freight and long-haul passenger trains -- exercised an effective restraint on patronage. Over the three month period, just over 3% of all trains were delayed, and nearly 70% of these delays were ten minutes or less. On average, then, only one train in every hundred suffered a delay of longer than ten minutes at any station: an impressive record of reliability.

The chart below shows the number of passengers delayed for the average week over the period December 1967 to June 1968.



During the last quarter, less than 3% of all passengers experienced delays.

## 3.2 External factors

T.T.C. subway extensions                      Frequent reference has already been made to the extensions to the Bloor-Danforth subway line that were opened by the Toronto Transit Commission on Saturday May 11, 1968. These extensions added roughly three miles of track to each end of the existing east-west line, and nine additional subway stations were constructed. The maps below show the extensions, and their associated feeder buses, in relation to the existing GO stations.



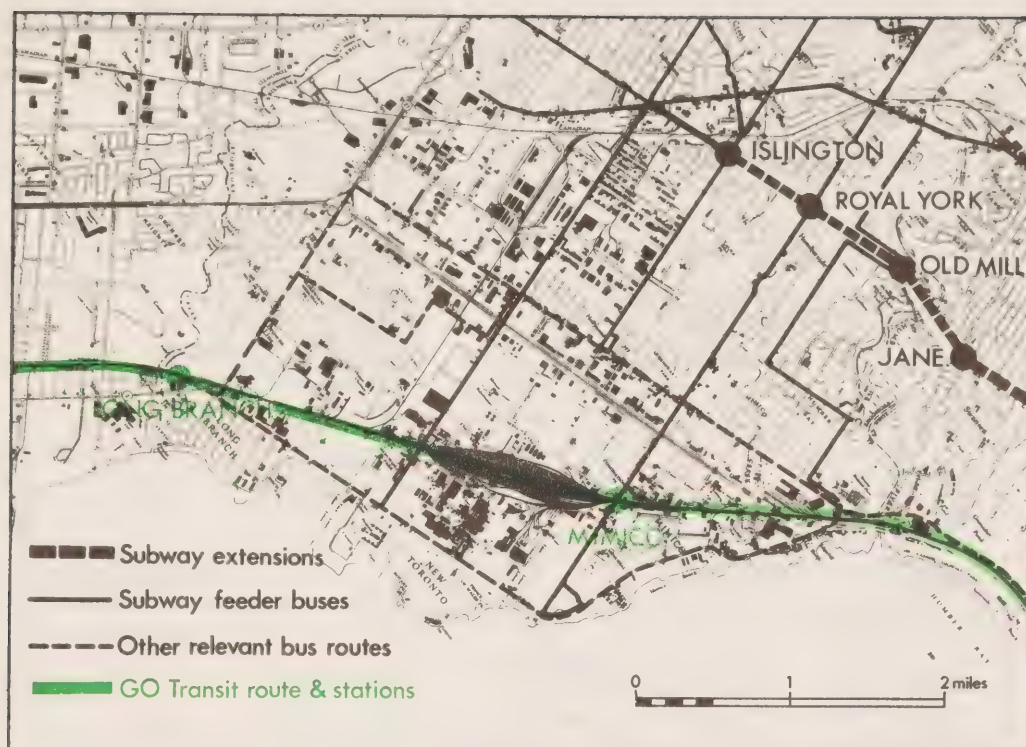
MAP 1: The new subway extensions and their associated feeder buses are shown in relation to the areas served by the Danforth, Scarborough and Eglinton GO Transit stations.

In the east the T.T.C. subway and bus service extends extensively into Scarborough. Many areas around the GO stations at Scarborough and Eglinton are served by a bus feeding either Warden or Victoria Park subway station . In addition, the Warden station has a large car lot which was still being completed during the review period, and a kiss'n'ride access road. There is also a car lot at Victoria Park, which has been available since the opening of the station. The charge for all-day parking at this lot is 50¢.

The new Main Street subway station is situated very near to the Danforth GO station, thus connection between the two systems can now be conveniently made both here and at Union Station.

The new subway stations on the western extension are geographically further away from the GO Transit line than is the case in the east (see Map 2 below). The Mimico area is served by buses which feed the Islington and Royal York subway stations. However, the T.T.C. service is not as comprehensive as in the Scarborough area.





*MAP 2: The new subway extensions and their associated feeder buses are shown in relation to the areas served by the Mimico and Long Branch GO Transit stations.*

Long Branch and its surrounding area is really outside convenient direct access to the subway. It is unlikely that many of the people who live within reasonable access to the GO station would find it worthwhile to switch to the T.T.C. People living further to the north of the station, however, might be attracted to the subway.

There is a car park provided at Islington but this had not been completed during the period under review.

T.T.C. subway extensions : the impact ....

Figure 11 below

shows carryings for the five GO Transit stations that were within the range of attraction of the subway extensions.

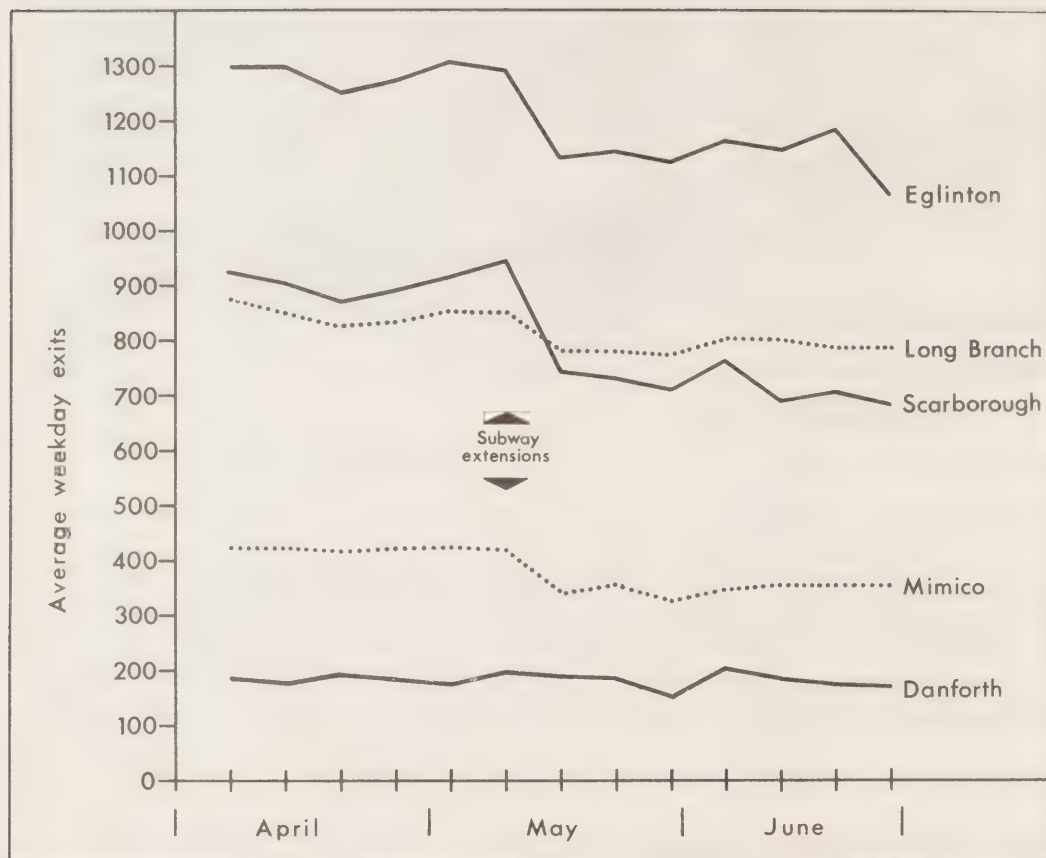


FIGURE 11: Exiting at the Long Branch, Mimico, Scarborough and Eglinton GO Transit stations fell off noticeably after the subway was extended.

Except for Danforth, the eastern corridor stations of Scarborough and Eglinton showed the most significant decreases in numbers of riders. The table below compares the average weekday exits over the six week period prior to the subway extensions with the six weeks immediately after.

	Average weekday exits		% increase
	Before	After	
Long Branch	852	789	-7.4%
Mimico	422	347	-17.8%
Total above	1274	1136	-10.8%
Scarborough	910	725	-20.3%
Eglinton	1288	1147	-10.8%
Total above	2198	1874	-14.7%
Union	7459	7017	-5.9%
All other stations	4833	4912	+1.6%

These percentage decreases directly reflect the degree of T.T.C. service in the individual station catchment areas. Scarborough and Mimico are the two stations closest to the new subway and both have T.T.C. feeder buses serving the nearby communities, the service in Scarborough being more comprehensive than that around Mimico. Eglinton is further away from the subway, but its catchment is well serviced by T.T.C. feeder buses, while it has been shown that most of the Long Branch area is outside effective subway access.

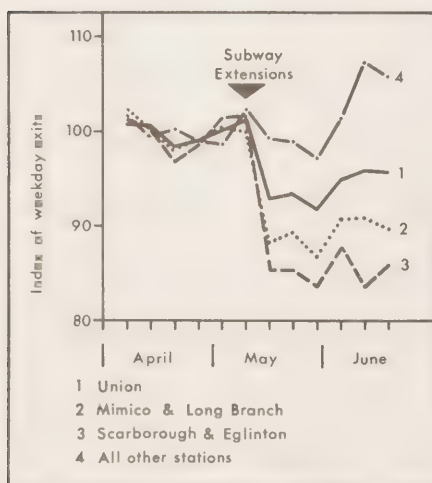
Union Station showed a decrease due to the fact that most of the trips that were lost to the T.T.C. had been return trips to Union. The rate of decrease was lower than for any of the individual subway-affected stations,



mainly because trips from the other stations to Union had increased, thereby partially offsetting the lost trips.

It is interesting to note the inclusion of a special kiss'n'ride access to the Warden station. Counts taken at the Scarborough GO station before and after the extension indicated a decrease of around 50 kiss'n' riders who had presumably switched to the T.T.C.

The inset below shows an index of average weekday carryings for the affected stations in the eastern corridor (Scarborough and Eglinton), the western corridor



(Mimico and Long Branch), Union and all other stations. (The average for the six weeks prior to the subway openings was the index base for each category). This enables these stations to be compared on a common base and visually demonstrates that the greatest decrease took place at the

eastern corridor stations. A total of around 300 to 350 people (or about 700 separate trips) were lost on each weekday by Scarborough and Eglinton, representing nearly 8% of the average eastern corridor exits. In the western corridor, around 4% of all exits, or some 130 to 150 riders were lost to the subway.



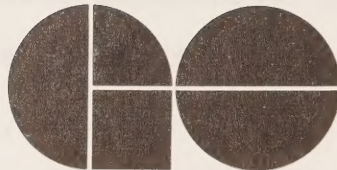
The subway extensions also made their impact felt on weekend carryings. It is estimated that between 100 to 200 riders were lost to the TTC on Saturdays. Over the five week period immediately after the subway extensions, exits at Eglinton, Scarborough, Union, Mimico and Long Branch decreased by around 17%. However, exits at all the other stations fell by 9% over the same period, suggesting that Saturday riding was experiencing a down-trend irrespective of the subway extensions.

On Sundays, the large discretionary trip component has given rise to comparatively large week-to-week fluctuations in carryings. Because of this, it is difficult to assess the true impact that the subway extensions have had on Sunday riding. However, it would be reasonable to assume that between 50 and 100 people who would have previously used GO Transit, would now use T.T.C. for their trips.

The full impact of the subway extensions cannot be finally assessed until the parking lots at Warden and Islington are in operation. This will be analyzed in the next report, C-4.

Other factors .... There was no exceptionally severe weather experienced during April, May or June. April was a pleasant month; warmer, sunnier and with

less rain than average. May, however, was appreciably wetter, colder and duller than average and June was also a disappointing month. This tended to delay the coming of summer proper and may have also delayed the impact of seasonal factors associated with summer activities.



**GOVERNMENT OF ONTARIO TRANSIT**





